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ABSTRACT

Twenty-one elementary school teachers from Taiwan and 53 elementary school teachers from the New York metropolitan area were interviewed to compare the structure of talented and gifted programs (TAG), their strengths and weaknesses, and provisions for program evaluation. Results indicated few differences between the gifted students, their work habits, or their abilities. The teachers of the gifted had similar backgrounds in both nations. They were well trained and had completed formal college training in educating the gifted. The structure of the programs, however, was basically different. In contrast to the United States, in Taiwan the gifted programs are formal and explicitly defined. Students are uniformly selected by a multi-tiered process developed by the Ministry of Education, teachers of the talented and gifted have formal, theoretical training, which usually includes between 30 and 60 credit hours. In-service training is regularly scheduled and mandatory for all teachers of the gifted. The curriculum is similar in all of Taiwan's programs and teachers commented on the limited selection of curricula materials. Finally, Taiwan's talented and gifted programs are formally evaluated by the Ministry of Education, but the results of the evaluations are not shared with the teachers. (Contains 36 references.) (CR)

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Gifted elementary programs in Taiwan, ROC and the United States: A Comparison

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Abstract

This study presents a comparison if talented and gifted (TAG) programs from Taiwan R.O.C. and the United States both historically and from the perspective of the teachers involved with the programs. Teachers of the talented and gifted from both countries were interviewed and their reflections concerning the programs are juxtaposed to the research. Twenty one elementary school teachers from Taiwan, and 53 elementary school teachers from the New York metropolitan area participated in the study which investigated the structure of the programs, their strengths and weaknesses, and provisions for program evaluation; the students who participate in TAG programs, their attitudes and work habits, and the teachers of the gifted and their preparation for teaching these special students.

Introduction

During the last two decades there have been both theoretical developments for the education of the gifted child (Colangelo & Davis, 1997; Davis & Rim, 1985; Piirto, 1994; Renzulli, 1977; Renzulli, Reis & Smith, 1981) and wide expansion of talented and gifted (TAG) programs. Information has been reported about American students (Callahan, 1992, 1994) enrolled in gifted programs and their achievement, and researchers (Stevenson 1983; Stevenson, Lee, & Stigler, 1986) have compared the performance of talented and gifted American students with those from other countries, but little information has been reported about the programs themselves. The purpose of this study was to compare the TAG programs in Taiwan ROC with those in the United States, not just theoretically but from the perspective of the teachers involved in the programs.

Review of the Literature

Marland (1972) defined giftedness as demonstrated achievement or potential ability in any of the following areas: general intellectual ability, specific academic aptitude, creative thinking, leadership qualities, or talent in the visual or performing arts. Renzulli (1977) described giftedness as the interaction of three clusters of human traits -- above average general abilities, high levels of task commitment, and the high levels of creativity necessary for productivity. Gowan (1955) wrote that the gifted child as one who had scored at least 129 on the Stanford-Binet Test of Intelligence or who ranked in the top two percent of the population on other standardized tests of general intelligence.

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Horowitz and O'Brien (1986) agreed that giftedness can be determined by an IQ score of 130 or higher. School achievement is highly correlated with a student's IQ score justifying its use in identifying the gifted (Kaufman & Harrison, 1986).

Both the United States and Taiwan generally adhere to a broad definition of giftedness in which children who possess superior intellectual ability or potential, have a special aptitude for mathematics and science, as well as those students talented in music and the arts are considered gifted (Mitchell, 1994; Stevenson, Lee & Chen, 1994; Sisk, 1990).

Special programs for talented and gifted students are relatively new in both countries. Awareness of the need to meet the special educational needs of this segment of the population is recognized by the governments of both the United States and Taiwan (Mitchell, 1994; Passow, 1982; Stevenson et al., 1994). During the 1960's Taiwan's economy changed from an agricultural to an industrial base. The lack of natural resources increased the government's interest in developing its human resources, and the long cultural respect for education made programs for gifted and talented youngsters a natural result. (Stevenson et al., 1994). A general effort was made by the Taiwan Ministry of Education to improve all education and to respond to the particular needs of special students (Wu, 1989). In 1968 legislation was passed stipulating that special education was to be provided for gifted students. The first experimental gifted program in Taiwan was begun in 1971; it involved fifth grade students at one elementary school. The curriculum emphasized the expanded study of mathematics, science and language (Stevenson, et al. 1994). Shortly thereafter a six year program was implemented throughout the elementary schools and later was extended to the junior high schools (1971) and high schools (1982) of Taiwan. All gifted programs were initiated and funded by the national government and operated through the public schools (Stevenson, et al. 1994).

Although gifted students had been identified in the United States for more than a century, no special educational programs were available for them (Resnick & Goodman, 1994). Gifted students were merely accelerated through the regular school curriculum (Gallagher, 1994). General public interest in the education of the gifted began in the United States when the late Senator Jacob Javits sponsored a bill to evaluate the status of gifted and talented students in U.S. schools. The results were the report, *Education of the Gifted and Talented* (Marland, 1972), and the creation of the Office of Gifted and Talented in the U.S. Office of Education. Limited funds in the form of incentive grants encouraged state and local districts to develop programs for gifted and talented students. TAG programs continued to grow throughout the 1980's (Mitchell, 1994), but as recently as 1978 fourteen states had no provision for the education of talented or gifted students (Zettel, 1978). Unlike Taiwan, TAG programs are not mandated in the United States, and services for the gifted and talented are often placed under the auspices of special education which at times limits funding available for the gifted (Mitchell, 1994). The U.S. government has no direct interaction with program design, implementation or funding. As a result TAG programs in the United States are more loosely construed and diverse than those in Taiwan and admission requirements are less stringent.

Admission into TAG programs is very different in the two countries. Taiwan students pass through a multi-layered process before being accepted into a TAG program.

Potential candidates are initially identified by their teachers. Then by law, the student must meet the following criteria: He/she must have a score more than two standard deviations above the mean on the standardized test given at the start of each school year. In addition he/she must be in the top two percent of the class or have scored more than one standard deviation above the mean on an achievement test covering all subjects of the curriculum. Similar, rigorous standards have been established to qualify students in Taiwan for special TAG programs such as those in mathematics, science, or the arts. Students recommended for a specialized TAG program must score at least two standard deviations above the mean in aptitude tests measuring their talent in the particular subject and either be in the top one percent of the class or have had a distinguished performance in a national or international competition. After passing the screening outlined above, a committee of teachers and administrators from the candidate's school submits a recommendation report to the regional ministry of education which then places the student into an appropriate program (Stevenson et al. 1994).

In the United States there is no national agreement on how students are identified and placed into TAG programs. Each state individually defines giftedness, (Mitchell, 1994). Some states use a minimum score on an IQ test or on standardized achievement tests to set a cut-off for admission to a TAG program. This criterion has the advantage of establishing a national standard for identification of giftedness (Mitchell, 1994). Other states pre-determine a percentage of the school district's population, usually the top two or three percent (Marland, 1972), who will be considered gifted. A percentage cut-off gives more flexibility to the school, allowing districts to use criteria other than standardized test scores to delineate giftedness. This gives the opportunity to students who are recommended by a teacher and students who demonstrate capacity and insight, especially in the arts, to participate in TAG programs (Resnick & Goodman, 1994). Many students, especially culturally diverse students or those from poor districts, who might be overlooked if standardized test scores were the only selection criteria are admitted into a TAG program (Mitchell, 1994).

Cultural differences affect the implementation of TAG programs. Asians view education as a once in a lifetime opportunity and as a highly prized commodity in their culture (Stevenson, 1983). They are more competitive than Americans, as honor and prestige are integral parts of their character (Campbell & Connolly, 1984; 1987). Asian parents are very supportive of their children's dedication and development of their inner drive (Campbell & Connolly, 1984) and encourage them to pursue higher education (Youn, 1994). Stevenson, Lee and Stigler (1986) found that higher demands were placed on elementary school students in Asian countries than on students in the United States.

The U.S. culture in contrast, is based on equality. It values practicality and the ability to generate wealth (Resnick & Goodman, 1994). American society rewards individual performance, but it fears distinction and special programs that call for differential treatment of a small group of elite (Resnick and Goodman, 1994). Americans resent intellect as a challenge to egalitarianism (Hofstadter, 1970). Thus although identification of the gifted and talented in the United States has broadened to include more students, an ambivalence about special opportunity for a small percent of students persists (Gallagher, 1994; Resnick & Goodman, 1994).

Many classroom teachers lack the professional preparation required to adapt instruction for high ability students (Archambault, Westberg, Brown, Hallmark, Emmons & Zhang, 1993; Westberg Archambault, Dobyns & Slavin, 1993). Training is usually through colleges and universities in the form of modeling by colleagues (Hays, 1995a) or in inservice seminars, workshops, and conferences (Hays, 1995b) although teacher education is becoming more widely available (Sisk, 1990). The United States has more education programs for teachers of the gifted than any other country and is one of only a few nations with special certificate programs and licenses in gifted education (Sisk, 1990). The Taiwan government is committed to increasing the number of trained teachers available for the gifted (Wu, 1984). A certified gifted teacher in Taiwan must complete 16 credits in gifted education, and the Ministry of Education has made provisions to fund continuing education for teachers of the gifted and to regularly retrain college faculty and ministry staff in the education of the talented and gifted (Wu, 1984).

Gifted programs in Taiwan are, for the most part, separate self-contained classes with trained teachers (Wu, 1984). They are based on intellectual ability and concentrate on acceleration and deepening of knowledge in academic subjects, especially mathematics and language (Stevenson et al., 1994; Wu, 1984). Special programs for students with demonstrated talents in the fine arts, music and dance are part of the TAG education in Taiwan (Wu, 1984).

Gifted classrooms in Taiwan are student driven, with the teacher available for discussion and consultation. Teaching is flexible with an emphasis on student research, debate and problem solving; passive listening to teacher lectures is minimal. Classrooms are situated next to the library to provide a better learning environment (Wu, 1984).

Pullout programs also exist in Taiwan and have gained popularity in recent years. Proponents of mainstreaming students believe student socialization is better served in a pullout approach (Wu, 1984).

Summer camps, held at the university, allow talented and gifted students to further their education and to interact with university professors and other gifted students in both educational and social settings (Stevenson et al. 1994; Wu, 1984).

Both self-contained and pullout programs also exist in the United States, but although there have been many descriptions of individual programs, there is no general picture of TAG programs in general (Mitchell, 1994).

Evaluation of TAG programs in Taiwan has been ongoing. Findings indicate that self-contained classrooms are more advantageous than the resource room model. Scholastic achievement in mathematics and language increased significantly for children in gifted programs, especially those in self-contained classes (Rogers, 1991). In addition Wu (1984) found there were no differences in social adjustment between students in self-contained and pullout programs. There was a detrimental effect, however, caused by the pressures of the admission process (Wu, 1984).

Research Questions

The discussion above was based on the literature which is often written by scholars outside the realm of the classroom. The remainder of the analysis will discuss

the same themes, but it will be based on the responses of actual teachers of the talented and gifted. In particular, the following questions will be addressed.

1. What are the structural similarities and differences between the TAG elementary school programs in Taiwan and the United States?
2. What are the strengths and weaknesses of TAG programs according to the teachers involved?
3. How do the teachers judge the ability and work habits of their gifted students?
4. How does the educational system prepare its teachers to instruct gifted students?
5. Are there evaluation plans that provide for the enhancement of talented and gifted programs?

Method

Interviews were collected from 53 teachers (7 males and 46 females) participating in talented and gifted elementary school programs in New York City, Nassau, Suffolk, and Westchester counties in New York and 21 teachers (5 males and 16 females) in Taiwan. The interviews were conducted by graduate students in English in the United States and in Mandarin in Taiwan. The interviewers recorded responses both manually and on audio tape. The Taiwan interviews were translated by a researcher fluent in both English and Mandarin. The translations and the tapes were then reviewed and revised by a second translator to insure consistency and accuracy of interpretation. The interviewers were instructed in how to use the interview guides, which followed a structured format, but were organized to encourage open-ended comments and discussions (Bogdan & Biklen, 1982; Miles & Huberman, 1984; Rist, 1982). The interviewers were instructed on how to ask appropriate follow-up questions. In order to minimize bias and interviewer effects, all teachers were asked the same questions. The topics used in the interviews were extracted from Orenstein's (1984) study of effective TAG programs. The interviews were organized within four areas: programs, identification, staff, and evaluation. Each of the teacher interviews took two hours to conduct and was supplemented by any available descriptive information that the school had available.

The study included 49 schools in the United States and 11 schools in Taiwan. Within each grade the number of identified gifted students varied from 79 in one Taiwan school to 140 in one of the U.S. schools. The grade of the students taught by the participating teachers ranged from kindergarten to sixth grade.

For the Taiwan data approximately two thirds of the sample responded to each question, and almost all of the U.S. participants responded to the questions. The analysis of the findings was based on these responses.

Analysis of Findings

In both the United States and Taiwan a top-down (Bacharach, Bauer, & Sheed, 1986) initiation of the programs occurred. In the United States administrators began the gifted programs (79%), and in Taiwan the programs were begun by the Ministry of Education, although Taiwan teachers reported being unsure of the originator of their program. School administrators were in charge of the programs in both nations and are responsible for making budgetary decisions in 75% of U.S. and 64% of the Taiwan TAG programs examined. Almost half the U.S. teachers and more than half the Taiwan

teachers reported being given a budget, and two-thirds of the teachers said they had adequate resources. U.S. teachers who felt they were lacking supplies created teacher materials, bought their own supplies, or borrowed books from the public library. Some Taiwan teachers complained that they were restricted and could use only issued materials.

Taiwan teachers reported that more than 50% of their TAG programs were grouped homogeneously in separate, self-contained classes while the remaining 44% were pull-out programs. Most of Taiwan's educational programs (80%) have an enhanced curriculum that supplements the standard curriculum with either enriched or additional studies.

U.S. teachers classified a smaller percent (43%) of their programs as self-contained groups and only 23% of the programs as pull-out programs. One-third of the U.S. programs fit neither of these descriptions and were labeled as other by the respondents. In the United States slightly more than one-half the programs covered both the traditional curriculum and advanced or additional studies. One fourth of the U.S. teachers surveyed taught only the regular curriculum. Interestingly 14% of the U.S. teachers reported working in a program that did not include the regular curriculum.

Greater freedom to extend the curriculum was a major advantage of teaching in a gifted program, according to many teachers, but Taiwan teachers, in particular, cited program inflexibility and the inability to design their own materials as a weakness of their programs. They also complained that the objectives of the program should be more clearly stated and communicated to the teachers.

Both the U.S. and Taiwan teachers expressed that the strength of TAG programs was that they encouraged students to work independently and to develop their own interests (89% U.S.; 79% Taiwan). Both groups of teachers stated that limiting class size to approximately 25 students was essential to implementing an effective TAG program. All teachers were concerned that the programs were detrimental to non-gifted students who were misplaced into a gifted program, and that the misplaced students stifled the program, which had to be altered to meet the non-gifted students needs.

Placement of students into gifted programs raised questions among the respondents. Taiwanese teachers reported that there is a systematic method to choose students for admittance into their gifted programs based mostly on the results of IQ tests and performance on achievement tests. Based on this criteria admission to TAG programs is limited to the top 3% of the nation's student population (more than 25,000 students). Although the ultimate selection is made by administrators, teacher recommendations are the initial step in selecting students to participate in the programs. In Taiwan parental input is not often solicited (18%) when identifying the gifted.

U. S. teachers expressed more variability in the identification process. Fifty percent of the teachers interviewed worked in programs that used a screening committee made up of teachers, administrators, and/or guidance personnel (29%) and parents (47%). The students were chosen not only on the basis of IQ tests, but also on more subjective criteria. Only 19% of the U.S. programs were limited to the top 3% of the student population; the other 81% included students from the top 20% of the school population. Teachers commented that including more of the population in the TAG program helped

to prevent it from becoming an elitist group, a problem cited by several Taiwan respondents.

Despite screening committees and the strict admissions criteria used in Taiwan, 76% of the U.S. teachers and 50% of the Taiwan teachers reported having non-gifted students in their programs. When asked how non-gifted children were placed in TAG programs, teachers' answers fell into two specific categories. The first reason was economic. In both the United States and Taiwan superior but not gifted students were often placed in programs to raise class enrollment to minimum levels, to relieve overcrowding in regular classrooms or to ensure a program would run. The second area was political. Both countries have an appeal process by which parents can request a review of the admissions process; in such appeals the parents' requests are usually honored, at times at the expense of their child's education. Moreover, U.S. teachers report that children whose parents are active in the school, such as leaders of the PTA, PTSA or school board members, are often placed in the TAG program regardless of their ability. The Taiwanese teachers revealed that parents often obtained the IQ tests and the achievement examinations and coached their children so they met entrance requirements. If the student still was not admitted to a particular program Taiwan parents often moved to a district which admitted the child.

When asked about the ability and work habits of the students involved in TAG programs more than two-thirds of the teachers observed that gifted students are usually self-motivated and tend to work harder than other students. Taiwan teachers saw the students' parents as very supportive. Parents worked diligently to alleviate any academic deficiencies their child might have and expected their child to compete and to be the best in their class. U.S. teachers commented that the parents of their students were very active and kept in touch with the teacher, but there were no references to the parent working with the child to move him/her ahead academically. Taiwan teachers repeatedly described boys as more creative and better in mathematics and science; they described girls as more sensitive and better in language arts. In both countries more than half of the teachers interviewed felt that the gifted students were easier to teach and that the students' parents were actively involved with the child's education and were in contact with the teacher.

Most teachers interviewed had been educating the gifted for some time; U.S. teachers had a mean of ten years in the gifted classroom and Taiwan teachers had been teaching the gifted for an average of 12 years. They were somewhat satisfied with their preparation and their programs, although several teachers in Taiwan pull-out programs felt that lack of communication among teachers, resource room personnel and program administrators was detrimental to the effectiveness of their TAG programs. The vast majority of respondents (79% U.S.; 87% Taiwan) had been trained to teach the gifted and felt that their training was adequate (U.S. rated 2.2 and Taiwan 1.9 on a three point scale) but several teachers commented that the coursework they took was too theoretical, and that it was hard to translate theory into practice. Teachers also reported that their schools encouraged them to continue in service training, however, in Taiwan there was more emphasis on continued education and in service classes were more regularly scheduled. Most of the teachers regularly read books and articles on the gifted student as well as journals dedicated to their education.

The existence of program evaluation was opposite in the United States and Taiwan. In Taiwan, 78% of the teachers affirmed that TAG programs were formally evaluated by the Ministry of Education, but that the results of the evaluation were not shared with the teachers. On the other hand, 71% of the U.S. teachers worked in programs that had no formal program evaluation; they measured the effectiveness of their programs on the basis of children's standardized test scores, parent feedback and principal's comments. On a personal level, both the U.S. and Taiwan teachers rated their TAG programs as effective (2.5 on a 3 point scale from ineffective to very effective).

Discussion

After comparing the TAG programs from both the United States and Taiwan, we found few differences between the students, their work habits or their abilities. In both countries they were highly motivated students who enjoyed exploring and developing their interests. Similarly, the teachers of the gifted had similar backgrounds in both nations. They were well trained and had completed formal college training in educating the gifted. They kept their knowledge current by attending in-service classes and by reading journals and articles about gifted education. In the two nations the teachers interviewed had been teaching the gifted for approximately the same time.

The structure of the programs, however, was basically different. In Taiwan the TAG programs are formal and explicitly defined. Students are uniformly selected by a multi-tiered process developed by the Ministry of Education, teachers of the talented and gifted have formal, theoretical training, which usually includes between 30 and 60 credit hours. In-service training is regularly scheduled and mandatory for all teachers of the gifted. The curriculum is similar in all Taiwan programs, and teachers commented on the limited selection of curricular materials. Finally, Taiwan talented and gifted programs are formally evaluated by the Ministry of Education, but the results of the evaluations are not shared with the teachers.

In the United States, on the other hand, TAG programs are more loosely construed. Criteria for student selection differed among school districts. While some schools used norm-referenced tests to identify their gifted students, more districts used a more subjective identification process. The curriculum in the U. S. schools was also more varied. It not only differed among districts, but the U. S. teachers had the flexibility to supplement the curriculum with their own materials. Evaluation of the TAG programs in the United States was generally informal, usually consisting of feedback from parents, of observation by the school principal, and of the students' outcomes on standardized testing.

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